

What is claimed is:

1. An optical recording medium, including a reflective layer and a recording layer, and constructed in a manner that a recording mark is formed on the recording layer by irradiating a laser beam so as to record information,

the recording layer being continuously formed in a relative moving direction to the laser beam with plural virtual recording cells, each of which has an arbitrary unit length and a unit width perpendicular to the unit length in the relative moving direction,

in the case where the laser beam is irradiated to the virtual recording cell over the entire allowable irradiation time T securable to one virtual recording cell, when the laser beam having a reference power, which is preset so that an optical reflectance of the virtual recording cell is reduced more than 50% with respect to the initial reflectance, being irradiated to the virtual recording cell so that an irradiation time is modulated into five stages or more within the allowable irradiation time T, the virtual recording cell being formed with a recording mark which gives five stages or more different optical reflectance to the virtual recording cell.

2. The optical recording medium according to claim 1, wherein in the case where the laser beam is irradiated to the virtual recording cell over the entire allowable irradiation time T, the reference power is preset so that a change of the optical reflectance until  $4/4T$  comes after  $3/4T$  of the allowable

irradiation time  $T$  elapsed is less than 20% of the initial reflectance.

3. The optical recording medium according to claim 2, wherein the reference power is preset so that a change of the optical

5 irradiation time  $T$  elapsed is more than 5% of the initial reflectance.

4. The optical recording medium according to claims 1, wherein the recording layer contains an organic dye.

10 5. The optical recording medium according to claims 2, wherein the recording layer contains an organic dye.

6. The optical recording medium according to claims 3, wherein the recording layer contains an organic dye.

15 7. An optical recording method, which irradiates an laser beam to an optical recording medium including a reflective layer and a recording layer, and forms a recording mark is formed on the recording layer so as to record information, comprising the following stages of:

continuously forming a virtual recording cell, which has  
20 an arbitrary unit length and a unit width perpendicular to the unit length, on the recording layer in a relative moving direction to the laser beam;

presetting a reference power of the laser beam so that an optical reflectance of the virtual recording cell is reduced  
25 more than 50% with respect to the initial reflectance in the case where the laser beam is irradiated to the virtual recording cell to the virtual recording cell over the entire allowable

irradiation time T securable to one virtual recording cell;

irradiating the laser beam having the preset reference power to the virtual recording cell so that the irradiation time is modulated into five stages or more; and

5        forming a recording mark which gives five stages or more different optical reflectance to the virtual recording cell.

8. The optical recording method according to claim 7, wherein in the case where the laser beam is irradiated to the virtual recording cell over the entire allowable irradiation time T,

10      the reference power is preset so that a change of the optical reflectance until  $4/4T$  comes after  $3/4T$  of the allowable irradiation time T elapsed is less than 20% of the initial reflectance.

15      9. The optical recording method according to claim 8, wherein the reference power is preset so that a change of the optical reflectance until  $4/4T$  comes after  $3/4T$  of the allowable irradiation time T elapsed is more than 5% of the initial reflectance.

20      10. The optical recording method according to claim 7, wherein the recording layer contains an organic dye, and is applied in the case of recording information in the recording layer.